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NOTICE OF ALLOWANCE AND FEE(S) DUE

28164 7590 06/04/2009 ACCENTURE CHICAGO 28164 BRINKS HOFER GILSON & LIONE P O BOX 10395

CHICAGO, IL 60610

EXAMINER					
ANDERSON, FOLASHADE					
ART UNIT PAPER NUMBER					
3623					
DATE MAILED: 06/04/2	009				

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/615,157	07/07/2003	Olivier Pelletier	10022/579	8242	
TITLE OF INVENTION: DETERMINING A SCENT OR TASTE PROFILE FOR PREDICTING A USER ADAPTED SCENT OR TASTE					

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	09/04/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

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III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

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								(Date)
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10/615,157 TITLE OF INVENTION	07/07/2003 : DETERMINING A SC	CENT OR TASTE PROI	Olivier Pelletier FILE FOR PREDICTING A	USER ADAPTED	SCEN	10022/579 T OR TASTE	8242	
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nonprovisional	NO	\$1510	\$300	\$0		\$1810	09/04/20	09
EXAM	INER	ART UNIT	CLASS-SUBCLASS]				
ANDERSON,	FOLASHADE	3623	705-010000	•				
"Fee Address" ind. PTO/SB/47; Rev 03-0 Number is required. 3. ASSIGNEE NAME A	ondence address (or Cha 3/122) attached. ication (or "Fee Address 2 or more recent) attach ND RESIDENCE DATZ ess an assignee is ident h in 37 CFR 3.11. Comp	inge of Correspondence "Indication form and. Use of a Customer A TO BE PRINTED ON	2. For printing on the p (1) the names of up to or agents OR, alternati (2) the name of a single registered attorney or a 2 registered aparent and listed, no name will be ITHE PATENT (print or typ e data will appear on the p OI a substitute for filing an (B) RESIDENCE: (CTI')	3 registered patent vely, e firm (having as a agent) and the name rneys or agents. If n printed.	members of uponam	er a 2	ocument has been	
Please check the appropr	iate assignee category or	categories (will not be	printed on the patent):	Individual 🚨 Cor	porati	on or other private gro	oup entity Gov	ernment/
4a. The following fee(s): Issue Fee Publication Fee (N	o small entity discount p		4b. Payment of Fee(s): (Plea A check is enclosed. Payment by credit car The Director is hereby overpayment, to Depo	d. Form PTO-2038	is atta	ched.		any s form).
	s SMALL ENTITY state	as. See 37 CFR 1.27.	b. Applicant is no lon					
NOTE: The Issue Fee and interest as shown by the i	d Publication Fee (if req ecords of the United Sta	uired) will not be accept ites Patent and Tradema	ted from anyone other than t rk Office.	he applicant; a regis	tered a	ittorney or agent; or th	e assignee or other	r party in
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	GILSON & LIONE		ART UNIT	PAPER NUMBER	
P O BOX 10395 CHICAGO, IL 60610			3623 DATE MAILED: 06/04/2009		

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1111 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1111 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

	Application No.	Applicant(s)		
in a second con-	10/615,157	PELLETIER, OLIVIER		
Notice of Allowability	Examiner	Art Unit		
	FOLASHADE ANDERSON	3623		
The MAILING DATE of this communication appeal all claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT R of the Office or upon petition by the applicant. See 37 CFR 1.312 1. ☑ This communication is responsive to <u>Applicant's after final</u> 2. ☑ The allowed claim(s) is/are 2-17 and 20.	(OR REMAINS) CLOSED in this application or other appropriate communication IGHTS. This application is subject to and MPEP 1308.	plication. If not included will be mailed in due course. THIS		
3. ☐ Acknowledgment is made of a claim for foreign priority ur a) ☐ All b) ☐ Some* c) ☐ None of the: 1. ☐ Certified copies of the priority documents have 2. ☐ Certified copies of the priority documents have 3. ☐ Copies of the certified copies of the priority do International Bureau (PCT Rule 17.2(a)). * Certified copies not received:	e been received. e been received in Application No			
Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONN THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.		complying with the requirements		
4. A SUBSTITUTE OATH OR DECLARATION must be subm INFORMAL PATENT APPLICATION (PTO-152) which give				
5. CORRECTED DRAWINGS (as "replacement sheets") mus	st be submitted.			
(a) including changes required by the Notice of Draftspers	son's Patent Drawing Review (PTO-	948) attached		
1) hereto or 2) to Paper No./Mail Date				
(b) ☐ including changes required by the attached Examiner's Paper No./Mail Date	s Amendment / Comment or in the C	office action of		
Identifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in t				
DEPOSIT OF and/or INFORMATION about the depo attached Examiner's comment regarding REQUIREMENT				
Attachment(s) 1. ☐ Notice of References Cited (PTO-892)	5. ☐ Notice of Informal P	tetent Application		
Notice of Professional Professional Review (PTO-948) Notice of Draftperson's Patent Drawing Review (PTO-948)	6. ☐ Interview Summary			
3. ☐ Information Disclosure Statements (PTO/SB/08),	Paper No./Mail Dat 7. X Examiner's Amendr	te		
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Examiner's Comment Regarding Requirement for Deposit of Biological Material	 Examiner's Statement 	8. X Examiner's Statement of Reasons for Allowance		
•	9 D Other	A □ Other		

/Folashade Anderson/ Examiner, Art Unit 3623 /Beth V. Boswell/

Supervisory Patent Examiner, Art Unit 3623

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DETAILED ACTION

Response to Amendment

 The following is in response to Applicant's after final amendment filed 04/27/2009. Claims 1, 18, and 19 are canceled and claims 2-7, 12, 17, and 20 are amended.

- The previously pending claims objection with respect to claims 2, 5, 7 and 20 has been withdrawn.
- 3. The previously pending claims objection with respect to claim 18 is now moot.

EXAMINER'S AMENDMENT

- 4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
- 5. Authorization for this examiner's amendment was given in a telephone interview with Marc V. Richards, registration number 37,921, on 05/20/2009. It is further noted that the agreement was reached via a series of conversation that took place at various times from 05/15/2009 until 05/20/2009. The application has been amended as follows:

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In the claims:

NOTE: The Examiner's amendment's are made with respect to the Applicant's after final amendment submitted 04/27/2009.

- 1. (Canceled)
- (Currently amended) A method for determining a scent or taste profile of a user comprising:

storing in a computerized system for each of a set of products chosen among products for which a database includes smell or taste prints constituted by a set of measurements given by smell or taste electronic sensors, a satisfaction note rating (SN) given by the user; and

automatically calculating by the computer weighting coefficients constituting said profile and respectively affected to said sensors measurements, by successive approximation of sets of weighting coefficients leading to minimizing the sum of the quadratic errors over the set of satisfaction notes; and

selecting a product based on said weighting coefficients constituting said profile;

wherein the weighting coefficients of the user's profile are determined by minimizing the result of the following formula by successive approximation of sets of weighting coefficients ^Qs,

$$\sum_{h=1}^{q} \left(\, \text{SN}_h - \sum_{j=1}^{n} \left(\! \alpha_j \, \cdot \, \text{MV}_j \, ,_h \right) \! \right)^{\! 2},$$

where $SN_{h_}$ designates the rating given by the user for the product of rank h of said set of q products, where Q_j designates the weighting coefficient of rank j affected to the product of rank j of the smell or taste prints, and where $^{MV_{j,h}}$ designates the scores of rank j of the smell print of product of rank h.

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(Previously presented) The method of claim 2, wherein each satisfaction note rating, is a value from 1 to 5.

- 4. (Previously presented) The method of claim 2, further comprising receiving from the user an additional rating for an additional product selected, on the basis of the already given ratings, as being the product for which the notation of the user will be the most relevant for the user profile.
- 5. (Previously presented) A method for selecting a product adapted to a user on the basis of its smell or taste comprising:

storing in a computerized system for each of a set of products chosen among products for which a database includes smell or taste prints constituted by a set of measurements given by smell or taste electronic sensors, a satisfaction note rating (SN) given by the user;

automatically calculating by the computer weighting coefficients constituting a user profile and respectively affected to said sensors measurements, by successive approximation of sets of weighting coefficients leading to minimizing the sum of the quadratic errors over the set of satisfaction notes;

receiving from the user an additional rating for an additional product selected, on the basis of the already given ratings, as being the product for which the notation of the user will be the most relevant for the user profile:

wherein the selection of the additional product is made by maximizing the following formula over all the products:

$$\sum_{j=1}^{m} \left(\sum_{L=1}^{NL} \frac{f(L) \cdot \left| \alpha_{j,S} - \alpha_{j,S^{t},L} \right|}{\alpha_{j,S}} \right),$$

where NL is the total number of values for the ratings L of the user; $^{\alpha j,\epsilon}$ is the set of coefficients $^{\alpha j}$ already calculated on the basis of the q products already noted by the user; $^{\alpha j,\epsilon}$,L is the set of coefficients $^{\alpha j}$, calculated for the set of q+1 products under the

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hypothesis of a note L for the product of rank q+1; and f(L) is an optional function of weighting of the different coefficients α_j .

6. (Previously presented) A method for selecting a product adapted to a user on the basis of its smell or taste, using a user profile determined according to any one of claims 2 or 4, the method comprising:

estimating a rating for products for which the database includes the smell or taste prints, by applying the weighting coefficients to the smell or taste prints; and selecting among the products, a subset on the basis of the estimated rating.

7. (Currently amended) A method for selecting a product adapted to a user on the basis of its smell or taste comprising:

storing in a computerized system for each of a set of products chosen among products for which a database includes smell or taste prints constituted by a set of measurements given by smell or taste electronic sensors, a satisfaction note rating (SN) given by the user;

automatically calculating by the computer weighting coefficients constituting a user profile and respectively affected to said sensors measurements, by successive approximation of sets of weighting coefficients leading to minimizing the sum of the quadratic errors over the set of satisfaction notes;

estimating a rating for products for which the database includes the smell or taste prints, by applying the weighting coefficients to the smell or taste prints; and

selecting among the products, a subset of products on the basis of the estimated rating,

wherein the estimated rating for each product is obtained by applying the following formula:

$$IP_{i} = \sum_{j=1}^{n} \alpha_{j} \cdot MV_{i,j},$$

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where IPi designates the note estimated for the product Pi of the database, where $^{\alpha j}$ designates the weighting coefficient of rank j affected to the product of rank j of the smell or taste print according to the user's profile, and where $^{MV_{ij}}$ designates the measurement of rank j of the smell or taste print of product of rank i.

- (Previously Presented) The method of claim 6, in which the product of said subset is selected for having an estimated rating close to the highest or lowest rating within a predetermined margin.
- (Original) The method of claim 6, in which a predetermined number of products having the highest or lowest estimated rating constitutes said subset.
- 10. (Previously Presented) The method of claim 6, applied to perfumes selection.
 - 11. (Previously Presented) The method of claim 6, applied to wines selection.
- 12. (Currently amended) A system for determining a scent or taste profile of a user comprising:
- a database containing smell or taste prints of products constituted by a set of measurements given by smell or taste electronic sensors;
- a memory element for storing a user rating of each of a set of products chosen among the products contained in said database; and
- a calculator for determining weighting coefficients constituting said profile and respectively affected to said sensors, by successive approximation of sets of weighting coefficients leading to minimizing the sum of the quadratic errors over the set of ratings and for selecting a product based on said weighting coefficients constituting said profile:

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wherein the weighting coefficients of the profile are further determined by the calculator by minimizing the result of the following formula by successive approximation of sets of weighting coefficients α .

$$\sum_{h=1}^{q} \left(\, \text{SN}_h - \sum_{j=1}^{n} \! \left(\! \alpha_j \, \cdot \, \text{MV}_{j\,\text{,}h} \right) \! \right)^2,$$

where SN_h designates the rating given by the user for the product of rank h of said set of q products, where Q_j designates the weighting coefficient of rank j affected to the product of rank j of the smell or taste prints, and where $^{MV_{j,h}}$ designates the scores of rank j of the smell print of product of rank h.

13. (Previously Presented) The system of claim 12, further comprising:

an estimator to determine estimated ratings for products that have their smell or taste print in the database, by applying the weighting coefficients to the smell or taste prints; and

a selector for selecting among the products, a subset on the basis of the estimated ratings.

- 14. (Previously Presented) The system of claim 13, wherein said products are perfumes or wines.
- 15. (Previously Presented) The system of claim 13, wherein said selector is configured to select a subset of products having estimated ratings within a predetermined margin of the highest or lowest estimated rating.
- (Previously Presented) The system of claim 12, further comprising a smell or taste electronic sensor.

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17. (Currently amended) The method of claim 4 2, wherein said satisfaction note rating is a value from 1 to 3.

- 18. (Canceled)
- 19. (Canceled)
- (Previously Presented) A system for selecting a product adapted to a user on the basis of its smell or taste, using a user profile, comprising:
- a database containing smell or taste prints of products constituted by a set of measurements given by smell or taste electronic sensors;

a memory element for storing a user rating of each of a set of products chosen among the products contained in said database; and

a calculator for determining weighting coefficients constituting said profile and respectively affected to said sensors, by successive approximation of sets of weighting coefficients leading to minimizing the sum of the quadratic errors over the set of ratings; for estimating a rating for products for which the database includes the smell or taste prints, by applying the weighting coefficients to the smell or taste prints; and for selecting among the products, a subset of the products on the basis of the estimated rating,

wherein the estimated rating for each product is obtained by the calculator by applying the following formula:

$$IP_{i} = \sum_{j=1}^{n} \alpha_{j} \cdot MV_{i,j},$$

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where IP_i designates the note estimated for the product P_i of the database, where $^{\alpha j}$ designates the weighting coefficient of rank j affected to the product of rank j of the smell or taste print according to the user's profile, and where $^{MV_{i,j}}$ designates the measurement of rank j of the smell or taste print of product of rank i.

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Reasons for Allowance

6. Claims 2-17 and 20 are allowed

- 7. The following is an examiner's statement of reasons for allowance:.
- 8. In regards to independent claim 2 none of the prior art of record, taken individually or in combination teaches inter alia, "selecting a product based on said weighting coefficients constituting said profile; wherein the weighting coefficients of the user's profile are determined by minimizing the result of the following formula by successive approximation of sets of weighting coefficients α;

$$\sum_{h=1}^{q} \left(SN_h - \sum_{j=1}^{n} (\alpha_j \cdot MV_{j,h}) \right)^2,$$

where SN_h designates the rating given by the user for the product of rank h of said set of q products, where Q_j designates the weighting coefficient of rank j affected to the product of rank j of the smell or taste prints, and where $^{MV_{j,h}}$ designates the scores of rank j of the smell print of product of rank h."

9. In regards to independent claim 5 none of the prior art of record, taken individually or in combination teaches inter alia, "receiving from the user an additional rating for an additional product selected, on the basis of the already given ratings, as being the product for which the notation of the user will be the most relevant for the user profile; wherein the selection of the additional product is made by maximizing the following formula over all the products:

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$$\sum_{j=1}^{m} \left(\sum_{L=1}^{NL} \frac{f(L) \cdot \left| \alpha_{j,S} - \alpha_{j,S',L} \right|}{\alpha_{j,S}} \right).$$

where NL is the total number of values for the ratings L of the user; $^{\alpha}j.^{s}$ is the set of coefficients $^{\alpha}j$ already calculated on the basis of the q products already noted by the user; $^{\alpha}j.^{s}$,L is the set of coefficients $^{\alpha}j$, calculated for the set of q+1 products under the hypothesis of a note L for the product of rank q+1; and f(L) is an optional function of weighting of the different coefficients $^{\alpha}j.^{s}$

10. In regards to independent claim 7 none of the prior art of record, taken individually or in combination teaches inter alia, "estimating a rating for products for which the database includes the smell or taste prints, by applying the weighting coefficients to the smell or taste prints; and selecting among the products, a subset of products on the basis of the estimated rating, wherein the estimated rating for each product is obtained by applying the following formula:

$$IP_{i} = \sum_{j=1}^{n} \alpha_{j} \cdot MV_{i,j},$$

where IPi designates the note estimated for the product Pi of the database, where $^{\alpha j}$ designates the weighting coefficient of rank j affected to the product of rank j of the smell or taste print according to the user's profile, and where $^{MV_{i,j}}$ designates the measurement of rank j of the smell or taste print of product of rank i.

11. In regards to independent claim 12 none of the prior art of record, taken individually or in combination teaches inter alia, "selecting a product based on said weighting coefficients constituting said profile; wherein the weighting

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coefficients of the profile are further determined by the calculator by minimizing the result of the following formula by successive approximation of sets of weighting coefficients ${}^{\alpha}_{i}$,

$$\sum_{h=1}^{q} \left(SN_h - \sum_{j=1}^{n} (\alpha_j \cdot MV_{j,h}) \right)^2,$$

where SNh designates the rating given by the user for the product of rank h of said set of q products, where ${}^{\alpha}$ designates the weighting coefficient of rank j affected to the product of rank j of the smell or taste prints, and where ${}^{M}V_{j,h}$ designates the scores of rank j of the smell print of product of rank h.

12. In regards to independent claim 20 none of the prior art of record, taken individually or in combination teaches inter alia, "a calculator for determining weighting coefficients constituting said profile and respectively affected to said sensors, by successive approximation of sets of weighting coefficients leading to minimizing the sum of the quadratic errors over the set of ratings; for estimating a rating for products for which the database includes the smell or taste prints, by applying the weighting coefficients to the smell or taste prints; and for selecting among the products, a subset of the products on the basis of the estimated rating, wherein the estimated rating for each product is obtained by the calculator by applying the following formula:

$$IP_{i} = \sum_{j=1}^{n} \alpha_{j} \cdot MV_{i,j},$$

where IP_i designates the note estimated for the product P_i of the database, where α_j designates the weighting coefficient of rank j affected to the product of rank j

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of the smell or taste print according to the user's profile, and where ${}^{MV_{i,j}}$ designates the measurement of rank j of the smell or taste print of product of rank i.

- 13. The prior art of record most closely resembling Applicant's claimed invention are Juergens (US Patent 5,200,909), Hillier et al (Introduction to Operation Research, published 01/1995).
- 14. Juergens teaches a method for the evaluation of wine characteristics by "(1) determining the most important characteristic in consumer's wine preferences and purchase decisions; (2) determining whether those characteristics are linked to wine constituents which can be quantitatively determined, and making the quantitative determinations; and (3) converting the quantitative determinations to readily understandable ratings scales which correlate those characteristics important to consumers with the objective laboratory data," (col. 3, lines 20-36). Juergens further teaches where the scales values are determined calculated by a computer (col. 9, lines 21-25). And the customer of Juergens is choose a preference score in the areas of "body, tannin, astringency and sweetness. (col. 10, lines 56-59. Lastly Juergens teaches the "subroutine E prints the recommend wine list to the computer screen and/or printer." (col. 12, lines 59-64). However in determining the scale values based on objective laboratory data Juergens fails to utilize any of the specific formulas disclosed by the instant application in the selection of a product.

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15. Hiller teaches formulas for minimizing sums of quadric errors (pp. 820-826).
However minimizing sums of quadric errors Hiller fails to utilize any of the specific formulas disclosed by the instant application or the these error are over a set of satisfaction nodes.

16. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FOLASHADE ANDERSON whose telephone number is (571)270-3331. The examiner can normally be reached on Monday through Thursday 8:00 am to 5:00 pm EST.

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Boswell can be reached on (571) 272-6737. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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